

Colorado River Citizens' Forum
May 16, 2006
Yuma, Arizona
***Tentative Meeting Notes**

Board Members in attendance:

Brian McNeece
Paul McAleese
Roger Gingrich
Wade Noble
James Davey

Board Members absent:

Marie Barrett
Tracy Register
Eric Reyes
Pablo Orozco

Staff in attendance:

Al Goff
Anna Muñoz

MxIBWC staff in attendance:

Francisco Bernal

About 18 additional members of the public in attendance.

Welcome and Introductions

Al Goff welcomed the attendees and introduced Brian McNeece who gave a brief summary of the Forum's existence. He asked the board members to introduce themselves. He then asked attendees to introduce themselves.

Yuma Desalting Plant – Jim Cherry, Area Manager, U.S. Bureau of Reclamation, YAO

The facility, which is the largest reverse osmosis plant in the world, has been dormant for the last 18 years other than a test run for six months in 1992-1993. Former USBR Commissioner John Keys announced last year that a demonstration run of the plant would be conducted next year. This means that 10% of plant will run for 90 days. The objectives for this demonstration are to 1) demonstrate the operability of the plant. 2) give the opportunity to verify cost estimates. 3) test current technology upgrades. 4) to improve readiness of plant should it be called upon to operate. 5) to look at the impact to the Cienega Santa Clara, want to ensure it doesn't ruin the habitat area (aprox. 15,000 acres).

At the same time during the demonstration run for 90 days, a one-year program will be set to monitor the Cienega. Environmental groups that will do the monitoring have set a program to take samples of the water temperature, ph, and salinity in various places within that habitat area so they can get some kind of idea of what the impacts of running the plant are (17sites).

Q/A:

Q: You mentioned running water from the MODE (Main Outlet Drain Extension) to the plant; will you be using any groundwater?

A: At this point we do not have a piping system to go directly to the plant from groundwater sources. We do have a mini lab plant set up at the well that we have been looking at the past eight months. Continuing to look to see if we can pipe water directly to the plant.

Q: As for the permitting to put the plant water into the river, how is that coming along?

A: It's an on-going challenge but we are continuing to work with the State of Arizona.

Q: What is the capacity of the plant?

A: As designed, its roughly 80,000 acre-feet a year. It's a huge amount of water for potable use but not tremendous enough for agriculture use. There are close to 2,700 reverse osmosis desalination plants in the world and every one of them is being used to augment the potable supply, not one of them are taking the water and putting it into the river.

Q: But you would have to put it into the river?

A: That's the way it was authorized.

Q: It would be more trouble to try to get it for potable use than putting it back in river?

A: At this point, we don't having the plumbing to put it into the city water supply. It's possible, we are continuing to study this.

Q: What is the present cost of desalinization?

A: For full plant operation we are looking at \$300 to \$400 per acre-foot.

Q: You saw 100 plants in Florida, how much is the cost per acre-foot?

A: Florida blends their water. They are taking groundwater, desalting and mixing it with city water supplies. The reason is because you can't deliver pure desalted water to customers. This is to stabilize the water. Cost is a little more, I don't have a figure.

Q: Has there been any discussion of selling or moving the plant somewhere else like the coast, San Diego area?

A: Cost would be really high, it's easier/cheaper to build a new one than moving the plant.

Q: What is the status of the deficiencies/repairs of the plants?

A: We started off with 18, now we are down to 9. Working on the nine deficiencies. Will need only to repair two of the deficiencies to run the demonstration next year.

Q: When is the demonstration run?

A: Start to check the system in December for any leaks, etc. Tentatively the demonstration is to run from March 1st through June 1st before the summer heat arrives because the chemical use gets too high and the cost goes up. If the target date is not possible, will run the demonstration first thing in fall.

Status Report on the All American Canal Lining Project – Paul Peschel, Imperial Irrigation District

Provided hand-outs and gave a PowerPoint Presentation as follow:

History of the project:

- Congressional authorization of the Project signed into law by the President on November 17, 1988
- Concrete lining initially was from Station 1170+27 just downstream of Pilot Knob to Drop 4, a total of about 29 miles

- During preparation of the EIS/EIR the Project was modified to run from Station 1250+00 to Drop 3 due to:
 - Major environmental issues between Drops 3 & 4 and costs to mitigate
 - Moved the starting point away from Pilot Knob, (a sacred area of the Quechan Indians) to eliminate any potential environmental/cultural conflicts
- The Record of Decision (ROD) was approved on July 29, 1994
- Reclamation completed and filed the EIS/EIR in July 1994
- Reclamation undertook a Re-examination and Analysis of the 1994 FEIS/EIR and ROD, which determined said documents remained current with the proposed action
- California State Legislature passes SB 1765 continuously appropriating \$200 million for the both the AAC and Coachella lining projects, with \$126 million set-aside for the AAC Lining Project. The Governor signed this bill into law on September 24, 1998
- California voters in 2003 approved Proposition 50; includes \$20 million for the two canal projects; adds \$9.65 million to Project for total of \$135.65 million
- Quantification Settlement Agreement (QSA) and its related documents signed on October 10, 2003 with the Project being a key component to reduce California's water use to its 4.4 million acre-feet apportionment.

Project Activities:

Project team worked diligently on a fast-track basis to address a number of designs, construction, scheduling, and cost issues to minimize costs (construction, environmental, and operations/maintenance) yet optimize the new canal facilities and the required environmental mitigation:

- New parallel alignment effectively minimizes canal excavation, rights-of-way, and dewatering activities
- Reach 1B (sand dunes area) is most difficult—a number of Alternatives were considered. The embankment in-canal alignment was selected
 - Will reduce excavation and significantly reduce costs from other alternatives in this Reach
 - Reduce hauling by placing close to one million cubic yards in the existing canal
 - By reducing total earthwork operations also reduces PM10 and NOx emissions
 - Eliminates going through high dune area with sensitive dune habitat species

Higher than expected groundwater

- Since early 1990's the ground water has risen above the existing canal invert
- Conducted pumping tests to design dewatering system
- Performed a large Scale Aquifer Test
- Preliminary results indicate:
 - Can reduce overall cost significantly from initial estimates
 - Can pump level down in a relatively short time period
 - This work can be part of contractor's responsibility (initially thinking about removing from the contract)

Project has and will continue to be impacted by increases in fuel, cement, and to a smaller extent steel prices

- Optimizing above issues will assist in minimizing costs
- Biggest impact will be on earthwork and concrete costs
- San Diego did agree to pay the additional cost

AACLCC working together to ensure that all state funds required based on current schedule are available

- Will ensure that all state funds are used prior to the need for SDCWA funds for costs over \$135.65 million
- This will reduce financing costs to SDCWA and the project
- The bid out in April, award will be sometime in June. The idea is to work begin on Reaches 2 and 3. This will facilitate the construction of the parallel storage facility downstream of Drop 1 prior to starting in channel work in Reach 1
- The current schedule will result in certain reaches being completed in 2007 therefore allowing conserved water to be delivered to SDCWA and the San Luis Rey Indian Water Rights Settlement Parties earlier than anticipated
- Current schedule indicates completion of the project prior to December 31, 2008

Current Status

- 30% design effort – Completed
- 60% drawings and specifications – Completed
- 90% drawings and specifications – Completed
- Final drawings and specifications – Completed
- Issue documents for bidding – Completed
- Reaches 2 and 3 bids opened March 22, 2006 with Reach 1 bid opened April 12, 2006
- Notice to proceed – June 2006
- Construction starts – June/July 2006

Q: What is the average depth to groundwater?

A: Fairly high couldn't give you an actual number at this moment.

Q: An Imperial Valley farmer's lawsuit claims that the new design configuration, with it being narrower, is more dangerous to humans and animals. Can you speak to as why the design changed to the narrower configuration?

A: The new concrete lined section holds more water or the same amount of water more efficiently so you don't need that wide section. We do have safety ladders/cabling specified in plans.

Q: Is it cheaper to build the canals steeper?

A: Yes.

Mr. Peschel provided a handout on the Coachella Lining project. The length of the project is 23 miles and is about 60% complete. Have done quit a bit of constructional work. Almost complete on the earthwork.

Russell Kitahara, Coachella Valley Water District commented on the project. Have difficulty with back filling. You can come see the dewatering process. Back filling into the existing canal has raised the water level causing more seepage, making it difficult.

Q: Is it open, can the public go view the area or is there an environmental sensitive area?

A: You're welcome to come on down to view the project. You can contact the Water District and someone will assist you.

Q: Can you please explain again on the back filling into the old canal channel so you don't have to move the dirt somewhere else?

A: It makes the channel narrower so the water has to rise.

Q: The channel recently dug or new channel being dug?

A: No, back filling into old channel while there is water in it. As you narrow the canal in there the water level rises. New dirt seems to cause more seeping making the de-watering process difficult. It's not going as well as when we first started.

When first started dropping the cement, went very well anticipating a September completion date. However, with current issues, moving back to original December date. The canal actually was breached above North Shore, a contractor error.

Yuma East Wetlands Restoration Project – Kevin Eatherly, CIP, Project Manager

Project Accomplishments 2000-2005

- Unprecedented consensus reached among all stakeholders, strong partnership in place.
- Extensive Biological Surveys Completed on Entire Site
- NEPA/404 Process Complete for entire 1400 acres
- Approximately \$5,500,000 in Present Secured Funding for Design, Planning, Construction and monitoring (EPA/BOR/SJV/NFWF/AWPF/COY/QIT/NAWCA)
- 180 Acres of Initial Revegetation Underway
- 50 Acres of Channel/Wetland Restoration Underway
- Ongoing Recreation, Education and Conservation Programming

The YEW Pilot Project is complete and is currently in its two-year maintenance period. Installed backwater channel with water control structures.

Phase One South Channel Revegetation Project

- Channel excavation and water control structures complete
- Channel shoreline bioengineering underway (12,000 L.F. of shoreline pole plantings, plugs and seeding)
- Ongoing water quality, salinity monitoring

The entire channel shoreline will be planted with bulrush and higher dense sandbar willow and upper shelf will be planted with cottonwood and willow.

Showed a photo of Ibis Lake Area, October 2004. In 1999 this area was all standing water and bulrush marsh, over 3000 White Faced Ibis's roosting here in winter. As of fall 2003, no more standing water, the bulrush stand dead, tamarisk invaded and the Ibis's have not returned to date.

Showed photos of channel being constructed. Due to high flows in the river has caused groundwater to rise so the channel has water in it. Excavation is all land based. During excavation, just by clearing of the salt cedar and phragmites the native plants starting to come up voluntarily.

As for the water control structure, there is a stop log structure so it can essentially separate the backwater channel from the main channel of the river during higher flows. Can go up 7,500 to 10,000 cfs. It's important that current work doesn't get washed out.

Bioengineering: A T-metal pipe with a hose attached to it, like a water auger, push into sandy soil to get to groundwater, pull auger out, should pole in the hole and groundwater will spout to the top with out having to irrigate.

Willow bundles are tied and soaked in the water for 3 to 4 days until they are water logged and then laid on the bank line. Used for bank line stabilization and is doing very well. Have also transplanted cattail.

There are concerns about the Giant Salvinia, will continue to monitor. A boom has been put in at the inlet structure to try to keep free floating of the Salvinia in the channel. Haven't had any infestation and not sure how it would impact the project if an infestation would occur.

Arizona Game and Fish have provided some funding to restore one acre of Black Rail Habitat. Project completed December 2005. Currently working with the City of Yuma on having canoe programs on the backwater and having seasonal educational classes to educate the public on why its necessary to keep out of the area.



Q: What are the general designs for the black rail?

A: Marsh areas, a lot of cattail, don't have complete information at this time.

Trying different techniques with planting. Digging linear trenches and stick poles into ground. No irrigation is needed. Will sprout on their own. Need to make sure pole the earth all around each pole is packed really tight for it to live.



High salt in the area, went to irrigation community for assistance. Used sulfuric acid and sprinklers to push the acid into the ground. Found the chemical is expensive, uses lots of water and not to great to work with. Went to an N-Phuric acid and injection system. Huge amounts of natural regeneration with this bleaching.

Have a pilot project plant monitoring. Monitor average growth, survival percentage, average volume and factors influencing plant growth.

Q: Do you treat phragmites as invasive?

A: Yes, looking to eliminate it every chance we get.

Q: Mechanical or chemical?

A: Both

Are trying to limit chemical and mechanical application to keep invasive species under control and one way to do that is to get some ground cover. That is why we are trying to create our own local genetic stop.

NFWF 6 Acre Marsh/Riparian Restoration completed December 2005. Ongoing one-year maintenance period. Experimentation plots with salt tolerant grasses, forbs and wetland plant species.

The NFWF 6 acre site was healthy bulrush marsh 5 years ago. 2E water flow was cut off, the bulrush died and tamarisk invaded. 5 Years ago Clapper Rail where documented using this area, last year, none.

Quechan Indian Tribe AWP 25 Acre Revegetation clearing completed January 2006. Site analysis and design Jan-Feb 2006. Planting March-June 2006.

NAWCA/YHA AWP 65 Acre Revegetation project clearing in progress. Analysis and design Feb-April 2006. Project Construction Summer/Fall 2006.

North Channel Restoration Project clearing February 2006. Survey and engineering design Feb-April 2006. Weed control Summer 2006. Channel excavation and marsh restoration October-February 2006-2007. Pole plantings, plugs and seeding restoration. North channel project wetland salts exceed 30,000 ppm.

Future Project (200-300 Acres) Camoron Land Agricultural Conversion. Irrigation Infrastructure already in place. 300 acres of old agriculture land.

Yuma West Wetlands 35 acres of revegetation completed. Current maintenance ongoing.

Project Studies/Field Work Complete:

- Biological Evaluation
- Wetland Delineation
- Endangered Species Surveys (2002-2006) in All Existing Habitat Types Within Project
- Hydro Geomorphology
- Soil and Salinity Mapping on all Restoration Areas
- Topography
- Pre Restoration Water Quality in all Aquatic Areas
- Pre Restoration Vegetation Analysis
- Water Consumptive Use Analysis
- GIS Data Base Development
- Plant Growth and Photo monitoring in all Restoration Areas

Current Research Underway:

- Experimental planting with salt tolerant wetland/riparian plants
- Experimental plantings with a variety of bioengineering techniques that will require no irrigation. (Willow bundles, posts, trenches)
- Ongoing native seed collection plan and collection program
- Future flooding (using water control structures) of areas adjacent channel and monitoring of water quality
- Yearly bird surveys (including non YCRA/WIFL seasons)
- Ongoing plant monitoring, water quality and photo monitoring

Other Future Project Monitoring:

(Pending current funds)

- Inventory and long term monitoring of mammal, amphibian and reptile population
- Inventory and long term monitoring of terrestrial and aquatic invertebrates (food base for birds)
- Inventory and long term monitoring of fisheries
- Partnership with University Research Center, MSCP or other potential research partners

Planned Low Impact Recreation

(Restricted and built as per approved BE)

- Two small recreation facilities on upland desert portion adjacent mission hill and near Ogram ag land.

- Trails
- Canoeing (restricted in Ibis Lake area)
- New access gates will GREATLY reduce current site traffic, crime and wildcat dumping

Governor Napolitano has visited the area and was impressed with the project.

Funding Partners FY 2001-2005:

Concept Plan, Coordination and Administration (EPA/COY) \$200,000
 Permitting and Compliance, NEPA (EPA/COY) \$200,000
 Construction of Backwash Line to Recharge Wetlands (COY) \$1,000,000
 NFWF/NAWCA Revegetation Grants (55 Acres) \$600,000
 Interpretive Displays/Educational Programming (BOR) \$150,000
 AWPf Revegetation Grants (75 acres) \$850,000
 Fy 2003 BOR Grants, Native Plant Revegetation (25 Acres) \$300,000
 FY 2004-2006 BOR Grants, Native Plant Revegetation/Channel Restoration (150 Acres)
 \$2,200,000
 Total Funded Projects \$5,500,000

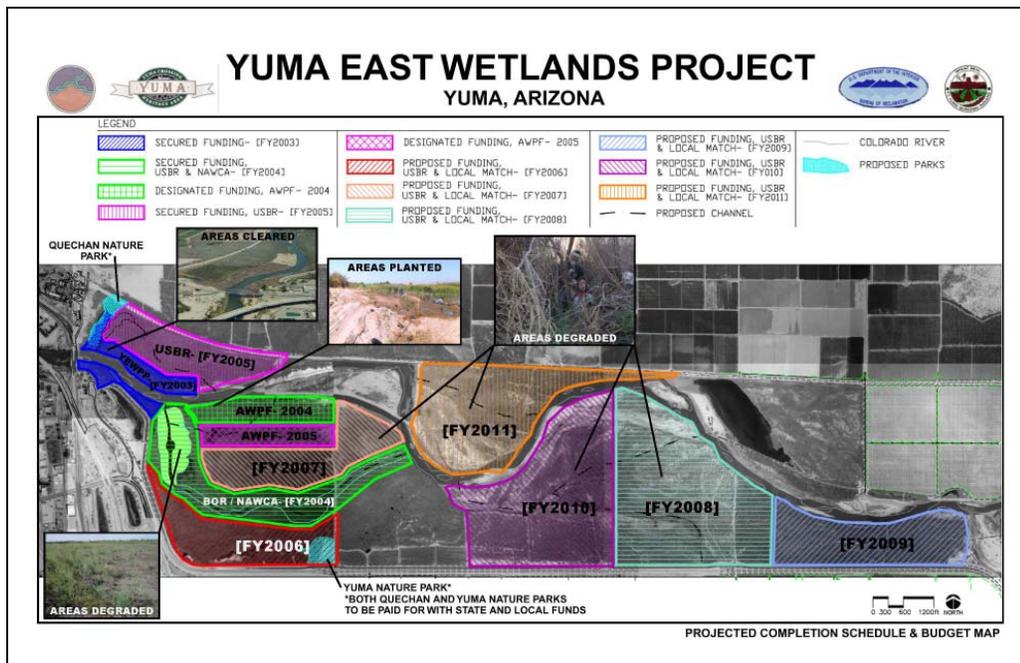
Yuma East Wetlands FY 2005-2013 Completion Budget (dredging and channel excavation):

Channel/Lake, Fisheries and Wetland Restoration Operations
 (\$1,000,000/Per Year FY 2006-2011 per year, Grants/COY/YCNHA) \$6,000,000

Revegetation, Ag Conversion, Recreation Facilities, Administration, Monitoring
 (\$1,500,000/Per Year FY 2006-2011, Grants/COY/YCNHA) \$9,000,000

Operations/Maintenance/Educational Programming, Yuma Crossing National Heritage
 Area (\$250,000/year/Per Year FY 2006-2011) \$1,500,000

Total Project Completion Budget \$16,500,000



Q: What is the average cost per acre?

A: Not sure right now.

Q: What is the total acreage of the project?

A: 1,400 acres

A 22 minute documentary “Return to Balance” is available. Contact Kevin.Eatherly@CI.YUMA.AZ.US or USIBWC.

Q: Are you using Anderson’s work from the U of A that was done in the late 70’s?

A: Training and most of the work are referenced to Dave Rosgens.

Q: All inside the level

A: yes

Q: Any threat of high river/Gila flows?

A: Keeping channel separated from the river. Can top the structure.

Q: For future maintenance, where are the funds coming from after the project comes on-line?

A: Don’t have that put together. Yuma Crossing Heritage is committed to the constant maintenance of the area and trying to create a balance to control it. Shouldn’t have to rely on Federal government funds. Need to have the community take ownership.

Website for the Yuma Heritage is www.yumaheritage.com

Lower Colorado River Boundary and Capacity Project – Al Goff, USIBWC, Yuma Project Manager

Project is on hold at this time for environmental issues.

Currently have a Memorandum of Understanding (MOU) with USBR. Have done the cross sections from below Laguna Dam to the Southerly International Boundary. Information is currently being calculated by the USBR, Denver office. This data will show current capacity from below Laguna Dam to south boundary.

USBR to also calculate PMF (Probable Maximum Flow) and year intervals (2, 10, 15 etc.). Current Minutes states 140,000 CFS is design/flow criteria for levee system.

When flow figure data is available, will go out for peer review. Another Minute will be likely established if agencies agree change is required. Once that is all complete, hopefully the project will begin.

On March 28th and 29th of this year a binational safety of dam inspections was conducted on Morelos Dam with the USIBWC/COR/Mexico City Engineers. A report was made as to what is needed to get Morelos Dam operational such as sediment removal to remove for safe operation.

USBR will assist with equipment, USIBWC will fund activity.

As for the Colorado River Boundary, meetings have been held with Mexico. Demarcation within the limitrophe is also on hold because of environmental other issues.

Q: The current carrying capacity is 50,000?

A: Right now approximately 60,000. In compiling the maximum flow, USBR will be looking at both the Colorado River and Gila River systems.

Brian McNeece commented on the presentation Jim Davey gave in the May 2005 meeting and hopes his presentation is considered in the project. It was a very valuable presentation.

Jim Davey commented that the presentation was emailed to all forum members and is available if anyone wants it.

Suggested Future Agenda Items

Update on the All American Canal

Update or tour of the Coachella project

Update from Eng. Efrain Munoz on Mexicali Sanitation Project

Al Goff suggested if anyone thinks of any other issues or item they would like to hear, please email or contact the Yuma IBWC office.

Next meeting to be scheduled August in Imperial County location TBA.

*Meeting notes are tentative and summarize in draft the contents and discussion of Citizens' Forum Meetings. While these notes are intended to provide a general overview of Citizens' Forum Meetings, they may not necessarily be accurate or complete, and may not be representative of USIBWC policy or positions.